

## A CAMEO guided tour

Take this tour of a planning and response scenario for Prince William County, Virginia, to learn how to use CAMEO along with MARPLOT to complete common emergency planning and response tasks.<sup>2</sup> We've entered sample data into CAMEO for the purpose of this tour. When you've finished the tour, you can delete the sample data (we'll explain how to do this at the end of the tour).

### Preparing for the tour

To complete the tour, you must already have installed CAMEO and MARPLOT. If you haven't already done that,

- follow the instructions in Chapter 2, beginning on page 11, to install CAMEO on your computer.
- follow the installation instructions in the MARPLOT manual (download it from [www.epa.gov/ceppo/cameo/marplot.htm](http://www.epa.gov/ceppo/cameo/marplot.htm)) to install MARPLOT.

*Note to users of LandView 5 or the LandView 5 demo:* If you have installed LandView or the LandView demo on your computer, you also have MARPLOT (which is a component of LandView). Do not install a second copy of MARPLOT.

You also need two MARPLOT maps, which are automatically installed when you install CAMEO and MARPLOT:

- a map of Prince William County, Virginia. This map is installed when you install MARPLOT. (If you have installed the LandView 5 Demo, you'll find the Prince William County map on your hard drive. If you have purchased a copy of LandView 5 on a CD or DVD, and don't have the map, you can download a copy from [www.epa.gov/ceppo/cameo/marmaps](http://www.epa.gov/ceppo/cameo/marmaps): click Virginia, then click Prince William.)

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2. This tour does not cover ALOHA. To learn to use ALOHA, take the guided tour in Chapter 3, "Learning the Basics," of the ALOHA user's manual (download it from [www.epa.gov/ceppo/cameo/aloha.htm](http://www.epa.gov/ceppo/cameo/aloha.htm)).

- the CAMEO Map (when you install the CAMEO modules, this map is installed into the “CAMEOMAP” folder inside the “CAMEO” folder).<sup>3</sup>

### A potential chemical hazard

Imagine that you are a member of the Local Emergency Planning Committee (LEPC) for Prince William County.<sup>4</sup> At the committee’s most recent meeting, you were asked to complete two projects:

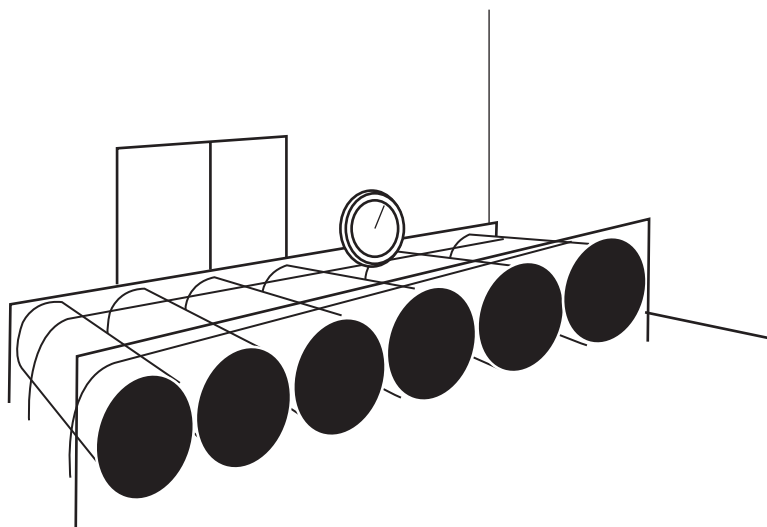
- evaluate the potential hazard to the county posed by the Green Valley Water Facility. You’ll use the hazards analysis procedures outlined in the guidebook, *Technical Guidance for Hazards Analysis* (see “Bibliography” on page 276 to find out how to obtain a copy).
- update the records describing this facility in CAMEO.

At its site in Prince William County, the Green Valley Water Facility stores and uses chlorine in amounts exceeding the Threshold Planning Quantity (TPQ) of 100 pounds (Figure 6). Chlorine is a designated Extremely Hazardous Substance (EHS) that’s frequently shipped to the facility along James Madison Highway, a major route that passes through populated areas within the county. Because the facility stores an EHS in quantities greater than the TPQ, some of the requirements of EPCRA, the Emergency Planning and Community Right-to-Know Act, come into play. In particular,

- the facility’s operator must submit a chemical inventory report (called a **Tier II form**) annually to state and local emergency planning authorities and the fire department.

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3. If you’ve just updated from the previous (FoxPro) version of CAMEO for Windows, check “Transferring your CAMEO Map” on page 203 to learn what to do with your existing CAMEO Map so that it will work with your new copy of CAMEO. Note that your existing map may not contain the sample map symbols for the Green Valley Water Facility and the Central Elementary School used in this tour; however, this is the only problem you should encounter. You can create the two symbol objects if you’d like (check your MARPLOT manual to learn how to create symbols).
  4. An LEPC’s role is to design, then regularly review and update a comprehensive emergency plan for a particular local emergency planning district. See “Section 301-303: emergency planning” on page 268.

- the LEPC must evaluate the potential hazard posed by the facility, as part of its emergency response planning work.



**FIGURE 6.** The chlorine storage room in the Green Valley Water Facility.

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To begin your analysis,

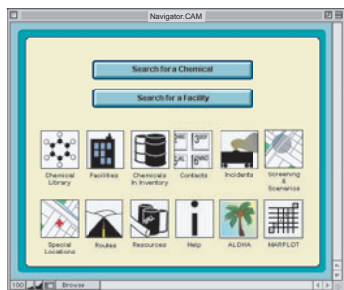
- you obtained the facility's most recent Tier II chemical inventory form, indicating the amounts, locations, and storage conditions for the chlorine stored at the facility (for more on Tier II reporting, see "Sections 311 and 312: community right-to-know requirements" on page 270).
- you talked with the facility's senior manager, Ms. Angela Wong, to familiarize yourself with daily operations at the plant.

### Starting CAMEO

Begin the Guided Tour by starting CAMEO:

- in Windows, in the Start menu, point to Programs, then CAMEOfm, then CAMEO. CAMEO will start up, and the Navigator window will be displayed.
- on a Macintosh, open the CAMEO folder and double-click on CAMEOfm to display the Navigator window.

The Navigator (shown at left) is the starting point for common CAMEO tasks.




### Assessing chlorine's hazards

The first step in your assessment is to familiarize yourself with the hazards posed by chlorine. The Chemical Library contains information about chlorine in a record for that chemical, so you'll search the library for this record.

You can search the Chemical Library for many kinds of information about a given substance: its chemical name (including trade names or synonyms), formula, United Nations accession number, Chemical Abstract Service registry number, labeling requirements, or other identifying attributes.

To search the Chemical Library for the record for chlorine:

1. In the Navigator, click . (If the Navigator isn't visible, from the File menu, choose Show Navigator.)

2. In the Chemical Name box, type “chlorine” and then press Search (as shown below).

**CAMEO Basic Search**

Operator for text fields: ☐ Contains characters ☒ Contains word starting with

Chemical Name:

CAS #:

DOT Label:

CHRIS Code:

UN/NA Number:

Reactive Hazards:

General Description:

Note: If you enter multiple criteria, records satisfying all of your criteria will be found.

CAMEO finds all the records in the Chemical Library for substances that have “chlorine” in their name or in a name synonym. It displays an alphabetical list of those records.

**Tip:** This particular search will work whether you choose to search for a name that **contains the characters** “chlorine” or a name that **contains a word starting with** those characters. (Searches for a word *starting with* certain characters will typically find fewer records.)

**Note:** This list of records is an example of a **found set**. A found set is created in a CAMEO module when you search that module. It includes all the records meeting the criteria of your search (in this case, your criterion was “has ‘chlorine’ in the name or synonym”). While there’s a found set in place within a module, you can see just those records. To see all the records, you need to clear the found set by selecting either Clear Search from the Search menu or Show All Records from the Record menu.

3. Find and double-click “CHLORINE” in the list.

You’re now viewing the record for chlorine (shown below). It contains information about chlorine under two main tabs:

**Chemical Identification Information**—this section contains (a) information used to identify the chemical and (b) regulatory information.

**Response Information Data Sheets (RIDS)**—the RIDS section contains emergency response recommendations and information for responders and planners.

The screenshot shows a web application window titled "Chemical Library". At the top, there are tabs for "Navigator" and "List". Below this is a search bar labeled "Chemical Name" containing the text "CHLORINE". The main content area is divided into two main sections: "Chemical Identification Information" (highlighted in green) and "Response Information Data Sheets" (highlighted in blue). Under "Chemical Identification Information", there are five sub-tabs: "Chemical Identification", "Synonyms", "NFPA Codes", "Regulatory Information", and "Screening and Scenarios". The "Chemical Identification" sub-tab is active, showing the following information: Formula: Cl<sub>2</sub>, DOT Label: POISON GAS, CORROSIVE, CAS #: 7782-50-5, UN/NA Number: 1017, STOC #: 4920523, 4920539, and CHRIS Code: CLX. Each field has a small icon to its right, likely for a dropdown or search function.

4. Under the Chemical Identification Information tab, click the smaller tabs to review five kinds of identification and regulatory information about chlorine:

**Chemical Identification:** common ID numbers, labels, and codes for chlorine, as well as its formula.

**Synonyms:** common name synonyms for chlorine, in English and other languages.

**NFPA Codes:** codes representing the hazards posed by chlorine (0 indicates little or no hazard; 4 indicates highest hazard).

**Regulatory Information:** designations and thresholds established for chlorine under Federal laws.

**Screening and Scenarios:** information used for hazards analysis under the *Technical Guidance*.

5. Click the Response Information Data Sheets tab, then click the smaller tabs in that section to see information about each of 10 emergency response-related topics.

Each piece of information in RIDS is notated to indicate its source. These notations appear as abbreviations in parentheses (check “Sources of CAMEO’s chemical data” on page 98 to see more information about each source).

In the example below, the general description of chlorine is from the Association of American Railroads (AAR).

Chemical Identification Information		Response Information Data Sheets		
Firefighting	Fire Hazards	Non-Fire Response	Health Hazards	Protective Clothing
<b>General Description</b>	Properties	Reactivity	Reactive Hazards	First Aid
<p>A greenish yellow gas with a pungent suffocating odor. Toxic by inhalation. Slightly soluble in water. Liquefies at -35°C and room pressure. Readily liquefied by pressure applied at room temperature. Density (as a liquid) 13.0 lb / gal. Contact with unconfined liquid can cause frostbite by evaporative cooling. Does not burn but, like oxygen, supports combustion. Long-term inhalation of low concentrations or short-term inhalation of high concentrations has ill effects. Vapors are much heavier than air and tend to settle in low areas. Contact CHEMTREC to activate chlorine response team 800-424-9300. Used to purify water, bleach wood pulp, and to make other chemicals (© AAR, 1999).</p>				

As you review the RIDS information about chlorine, consider the following questions, and note where you would check to find the kinds of information you would need quickly during a response:

What are the main hazards of chlorine? Could it become an airborne toxic gas hazard? Is it flammable? Is it reactive?

## Getting information about a facility

You can keep a record in the Facilities module for each facility that reports Tier II chemical inventory information to the LEPC. You then can cross-reference any facility record to

- a symbol representing its location on a MARPLOT map.

- records in the Chemicals in Inventory, Contacts, Screening & Scenarios, and Incidents modules, where you can maintain various kinds of information about facilities, including their chemical inventories, emergency contacts, hazards analysis results, and details of past incidents at given facilities.

You can search the Facilities module just as you searched the Chemical Library. The Green Valley Water Facility is in the town of Haymarket. To open the Facilities module and search for all the facilities in the town of Haymarket:

1. From the File menu, select Open, then Facilities. The module will open in List View (in List View, the names of all the records are shown in a list).
2. From the Search menu, select Start Search.
3. Type “haymarket” in the City box, then click Search, as shown below (it doesn’t matter whether you type letters in upper or lower-case).



You'll see a list of the three facilities located in Haymarket, including the Green Valley Water Facility. You'll work with the record for this facility.

Found Facilities		
Results of search for: City Contains characters haymarket		
Name	Dept	Street Address
Green Valley Water Facility (DEMO)	Chlorination	U.S. Highway 15
Adams Petroleum Refinery (DEMO)		Merovan Industrial Park A-9
M & S Chemicals (DEMO)	Woods Lake Plant	U.S. Highway 15

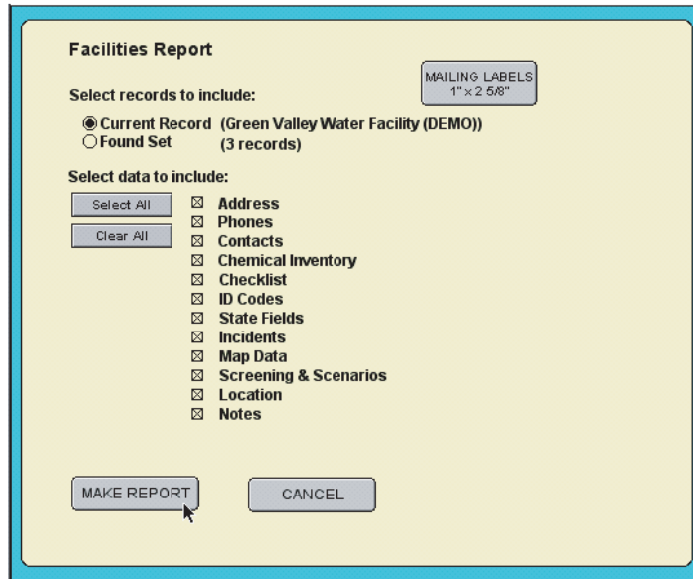
- In the list, double-click "Green Valley Water Facility (DEMO)" to open this record in Record View. In Record View, you can view the entire record and all the information in it.

The screenshot shows the 'Facilities' record view for 'Green Valley Water Facility (DEMO)'. The form is organized into several sections:

- Header:** 'Facilities' title, 'Last Modified 3/26/2002', and navigation buttons (Navigator, List, Edit).
- Form Fields:**
  - ☐ Shipper
  - Report Year: 1995
  - Facility Name: Green Valley Water Facility (DEMO)
  - Department: Chlorination Division
  - Site: 1 of 1
- Tabs:** ID Codes, State Fields, Map Data, Site Plan, Notes, Address, Facility Phones, Contacts, Chemical Inventory, Checklist.
- Address Section:**
  - Street Address: U.S. Highway 15
  - City: Haymarket
  - State: VA
  - Zip: 87530
  - County: North
  - Country:
  - Fire District:
  - Cross Street:
- Mailing Address Section:**
  - Town Hall
  - City: Haymarket
  - State: VA
  - Zip: 87530
  - Country:
- Email Section:**

- Click the tabs on the record to review the information about this facility. Check Table 1 on page 112 if you'd like to see definitions of all the kinds of information on a Facilities record. Later, you'll navigate to related records in the Chemicals in Inventory and Contact modules to look more closely at the chemical inventory and contacts information for this facility.
- From the File menu, select Make Report. You're about to create a printable report describing this facility.

7. Click the Current Record button if it isn't already selected.
8. Either (a) click Select All to include all the information from the record in the print report, or (b) click the box for each of the kinds of information you would like to include in the report.



The image shows a dialog box titled "Facilities Report". It has a yellow background and a blue border. In the top right corner, there is a button labeled "MAILING LABELS 1" x 2 5/8"". Below the title, the text "Select records to include:" is followed by two radio buttons: "Current Record (Green Valley Water Facility (DEMO))" which is selected, and "Found Set (3 records)". Below this, the text "Select data to include:" is followed by two buttons, "Select All" and "Clear All", and a list of data fields with checkboxes: Address, Phones, Contacts, Chemical Inventory, Checklist, ID Codes, State Fields, Incidents, Map Data, Screening & Scenarios, Location, and Notes. All checkboxes are checked. At the bottom, there are two buttons: "MAKE REPORT" and "CANCEL". A mouse cursor is pointing at the "MAKE REPORT" button.

9. Click Make Report. You'll see a view of the printable report.
10. Click Print. The Print Setup window will be displayed. Adjust any settings you'd like to change.
11. Click OK to display the Print window. Adjust any settings you'd like to change, then click OK to print the report. The report will be printed, and the view of the printable report will be displayed again.
12. Click Cancel to return to the Report setup window, then click Cancel again to return to the Facilities record for the Green Valley Water Facility.

## **Adding emergency contact information**

This facility record does not include any emergency contact information, so you'll add information about Angela Wong, the senior plant manager at the Green Valley Water Facility. To add that information, you'll need to enter

**Edit Mode**, in which you can make changes to the record. Right now, you're in **Browse Mode**: you can view records, but cannot change the information that you see.

Follow these steps to add the information about Ms. Wong:

1. Click the Contacts tab.
2. Click the Edit button in the toolbar.
3. Click Add Contact.

The screenshot shows the 'Edit Facilities' window. At the top, it says 'Last Modified 3/26/2002'. Below that, there's a 'Shipper' checkbox and a 'Report Year' dropdown set to '1995'. The 'Facility Name' is 'Green Valley Water Facility (DEMO)' and the 'Department' is 'Chlorination Division'. There's a 'Site 1 of 1' indicator. Below this are tabs for 'ID Codes', 'State Fields', 'Map Data', 'Site Plan', and 'Notes'. Under 'Notes', there are sub-tabs: 'Address', 'Facility Phones', 'Contacts', 'Chemical Inventory', and 'Checklist'. The 'Contacts' sub-tab is active, showing a table with columns: 'Last Name', 'First', 'Title', 'Organization', and 'Delete'. The first row contains 'Johns (DEMO)', 'Jordan', 'Safety Coordinator', 'Green Valley Water Facility', and a delete checkbox. Below this are several empty rows. At the bottom of the window, there are buttons for 'Add Contact', 'Edit Contact', 'Save Changes', and 'Cancel'.

You'll see a list of contacts in CAMEO, but the list doesn't yet include a record for Ms. Wong.

**4. Click Add New.**

Last Name	First Name	Title	Organization	Phone	Type
Duncan (DEMO)	Katherine				
Pace (DEMO)	Glenn				
Garcia (DEMO)	Luis				
Smith (DEMO)	George		Town of Haymarket		
Levi (DEMO)	George				
Town of Haymarket					
Johns (DEMO)	Jordan	Safety	Green Valley Water	7034539000	Emergency
Stephens (DEMO)	Brenda	Principal	Central Elementary	7038765432	Work
Cook (DEMO)	Bud				

To add a contact, click on a contact from the list then click the select button or initiate adding a new contact by clicking the add new button

Select Add New Cancel

- 5.** On the new, blank record, type the following information about Angela Wong:
- (1) click in the “First Name” box, then type “Angela.”
  - (2) press TAB to move your cursor to the “Last Name” box, then type “Wong (DEMO).”
  - (3) press TAB again to move to the “Organization” box, then type “Green Valley Water Facility.”
  - (4) TAB to the “Title” box, then type “Senior Plant Manager.” Next, press TAB to drop down the first Contact Type menu, then choose “Corporate Emergency Contact” from the menu.
- 6.** Fill out the items under the Address tab as follows (press TAB to move between boxes):
- a. Type “U.S. Highway 15” in the top street address box.
  - b. Type “Haymarket” in the City box.
  - c. Select “VA” from the State menu.
  - d. Type “87530” in the Zip box.
  - e. Type “Prince William” in the County box.
  - f. Type “Haymarket” in the Fire District box.
  - g. Type “awong@greenvalley.com” in the Email box.

7. Click the Phones tab, then click in the top Type box to drop down a menu of phone types. From the menu, select Work.

a. In the next box, type “703-232-5667.”

b. Press TAB twice to drop down the next Type menu, select Emergency from the menu, then type “703-232-7556” in the next box.

The new Contacts record displayed on your screen should look like the one below.

**Edit Contacts** Last Modified 4/25/2002

First Name: Angela Last Name: Wong (DEMO)  
Organization: Green Valley Water Facility  
Title: Senior Plant Manager  
Contact Type: Corporate Emergency Contact

**Address** **Phones** **Notes**

Type	Phone	Delete
Work	703-232-5667	<input type="checkbox"/>
Emergency	703-232-7558	<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

**Save Changes** **Cancel**

8. Press Save Changes. You'll see the list of contacts for the water facility, which now includes Ms. Wong.

The screenshot shows the 'Edit Facilities' window with the 'Contacts' tab selected. The window title is 'Edit Facilities' and it shows 'Last Modified 4/25/2002'. The 'Shipper' checkbox is unchecked. The 'Report Year' is set to 2000. The 'Facility Name' is 'Green Valley Water Facility (DEMO)' and the 'Department' is 'Chlorination Division'. The 'Site' is 1 of 1. The 'Contacts' tab is active, showing a table with columns: Last Name, First, Title, Organization, and Delete. The table contains two records: 'Johns (DEMO)' with first name 'Jordan', title 'Safety Coordinator', and organization 'Green Valley Water Facility'; and 'Wong (DEMO)' with first name 'Angela', title 'Senior Plant Manager', and organization 'Green Valley Water Facility'. There are buttons for 'Add Contact', 'Edit Contact', 'Save Changes', and 'Cancel' at the bottom.

Last Name	First	Title	Organization	Delete
Johns (DEMO)	Jordan	Safety Coordinator	Green Valley Water Facility	<input type="checkbox"/>
Wong (DEMO)	Angela	Senior Plant Manager	Green Valley Water Facility	<input type="checkbox"/>

9. Press Save Changes again to save the new record.

## Reviewing the facility's chemical inventory

CAMEO's Chemicals in Inventory module is one of several modules in which records related to facilities can be kept. In the Chemicals in Inventory module, you can keep records on the hazardous substances stored or used at facilities, or transported along routes in your community. From a Facilities record for a facility, you can quickly jump to the Chemicals in Inventory records for chemicals in that facility.

Under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, **Tier II forms** must be submitted each year by operators of facilities that maintain certain hazardous materials in more than minimum threshold amounts. On a Tier II form, the facility provides information about its inventory of hazardous materials (e.g., storage locations and amounts). Tier II forms are submitted to each state's State Emergency

Response Commission (SERC). Many SERCs then share the Tier II data with county- and local-level response and planning organizations, such as fire departments and LEPCs.

You can keep Tier II information in CAMEO's Chemicals in Inventory module. A Chemicals in Inventory record is similar to the actual Tier II form, with some exceptions. In particular, you can describe only one chemical or mixture on each Chemicals in Inventory record.

Now, you'll take a closer look at the chemical inventory information for Green Valley Water Facility:

1. Click the Chemical Inventory tab on the Facilities record for Green Valley Water Facility. You'll see a space where stored chemicals are listed. Just chlorine is listed on the Water Facility's record, because it's the only hazardous substance stored at the facility.

When you see the name of a substance in the Chemical Inventory list on a facility's record, that means there's a corresponding record in the Chemicals in Inventory module.

The screenshot shows the 'Facilities' window for 'Green Valley Water Facility (DEMO)'. The 'Chemical Inventory' tab is active, displaying a table with columns for 'CAS' and 'Chemical Name'. The first entry is '7782-50-5|Chlorine'. To the right of this entry is a button labeled 'RIDS'. Other tabs visible include 'ID Codes', 'State Fields', 'Map Data', 'Site Plan', 'Notes', 'Address', 'Facility Phones', 'Contacts', and 'Checklist'.

2. Click the RIDS button to the right of "Chlorine" in the list. The Response Information Data Sheet section of chlorine's Chemical Library record is displayed. This is the same set of response recommendations you reviewed earlier. As you can see, clicking the RIDS button for a substance in a facility's inventory is a quick way to access the response recommendations for that substance.
3. From the File menu, select Close. The Green Valley Water Facility record is visible again.

4. Double-click on the name “chlorine” (or on its CAS number). The Chemicals in Inventory record for chlorine at Green Valley Water Facility should open (as shown below).

The screenshot shows a software interface for managing chemical inventory. At the top, there are tabs for 'Navigator', 'List', and 'Edit'. The main title is 'Chemicals in Inventory' with a 'Last Modified' date of 12/5/2000. Below this, there are input fields for 'Facility / Route' (Green Valley Water Facility (DEMO)), 'Report Year' (2000), 'Dept.' (Chlorination Division), 'City' (Haymarket), and 'State' (VA). The 'CAS #' is 7782-50-5 and the 'Chemical Name' is Chlorine. There are buttons for 'View RIDS' and 'Adjust Link'. Below these are checkboxes for 'In Inventory' (checked), 'In Transit', 'EHS Substance' (checked), and 'Trade Secret'. An 'MSDS' field is also present. A tabbed interface below shows 'Location' as the active tab. The 'Location' tab contains a table with columns: Amount, Unit, Type, Press, Temp, and Location. The table lists four entries, all with 'Pounds' as the unit, 'A' as the type, '2' as the pressure, and '4' as the temperature. The locations are 'Chlorination Building #1', 'Chlorination Building #2', 'Chlorination Building #3', and 'Chlorination Building #4'. There are also tabs for 'Physical State & Quantity', 'Components', 'Dates', 'State Fields', and 'Notes'.

Amount	Unit	Type	Press	Temp	Location
	Pounds	A	2	4	Chlorination Building #1
	Pounds	A	2	4	Chlorination Building #2
	Pounds	A	2	4	Chlorination Building #3
	Pounds	A	2	4	Chlorination Building #4

5. Click the tabs on this record to review the information it contains about the storage amounts, storage locations, and hazards of chlorine at the water facility. Refer to Table 3 on page 130 to see explanations of all the information items on the record.

## Viewing the site plan

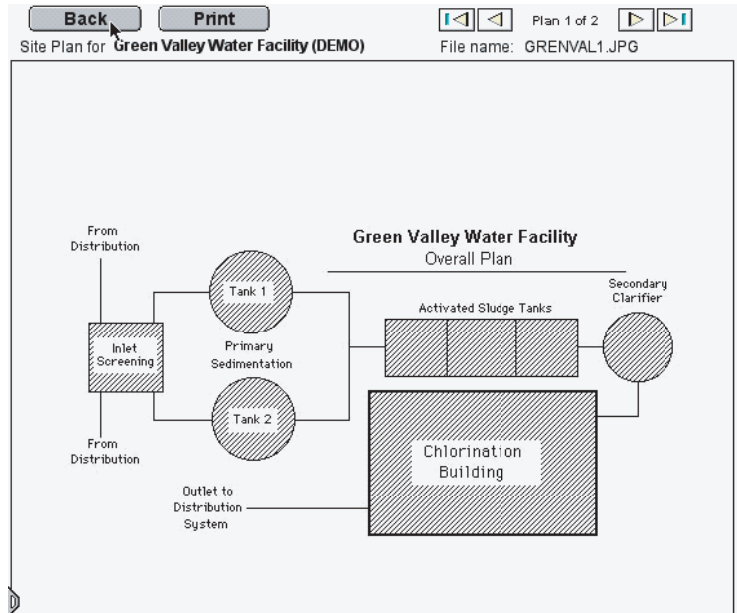
You can store facility site plans in CAMEO along with other information about facilities. To see the site plan for the Green Valley Water Facility,

1. From the Record menu in the Chemicals in Inventory record, select Show Related, then Facility/Route. The Facility record for Green Valley Water Facility will be displayed.

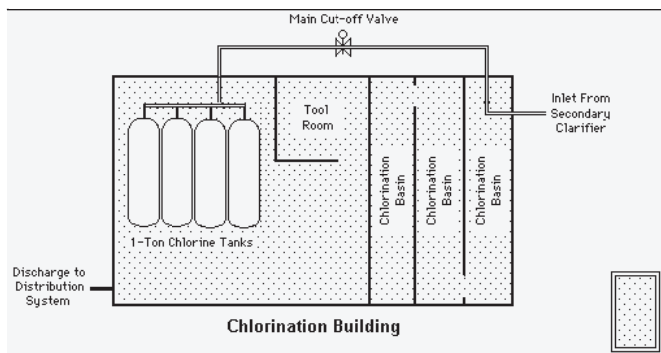
**Note:** Use Show Related when you need to quickly navigate among related records in different modules.



2. Click the Site Plan tab. You'll see a list of the two site plans for this facility.
3. Double-click grenval1.jpg. The site plan will be displayed (as below).



4. Click Back to return to the Facilities record.
5. Double-click grenval2.jpg, to see a plan of the chlorination building, then Back to return to the record.



You can create site plans like these in any graphics program, save them in common graphic file formats, and then include them with your Facilities records (see “Adding and editing site plans” on page 119).

## **Working with a map**

MARPLOT is the electronic mapping program included in CAMEO. In this section of the tour, you’ll learn how to display a map in MARPLOT, search for a particular location on a map, and link symbols on a map to records in CAMEO modules.

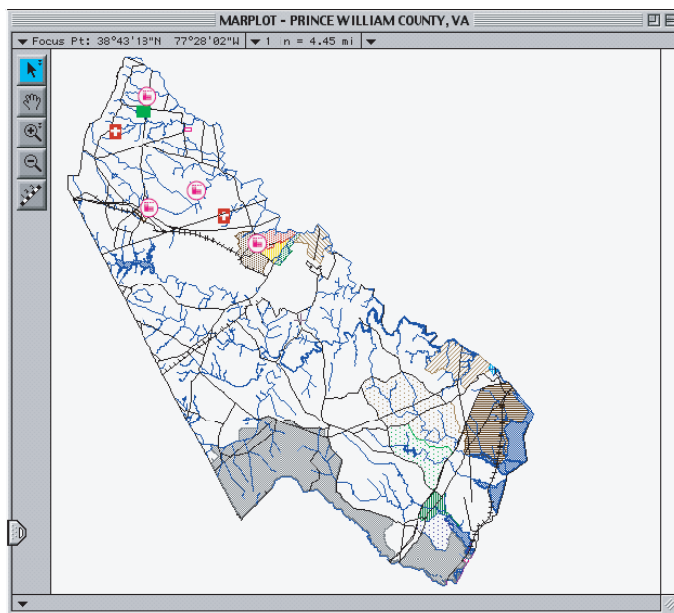
First, you’ll open the map of Prince William County in MARPLOT, and then find and view the location of the Green Valley Water Facility:

1. To start MARPLOT, from CAMEO’s Sharing menu, select MARPLOT, then select Go to MARPLOT.

MARPLOT will start up and be displayed. You might first be asked to locate MARPLOT:

- Unless you have LandView installed, navigate through the files on your hard drive to locate the MARPLOT folder (its default location in Windows is C:/MARPLOT). Open the folder and select the “MARPLOT.EXE” file (in Windows) or the “MARPLOT” file (on a Macintosh) inside the MARPLOT folder.
  - If you have LandView installed, locate the LandView folder (its default location in Windows is C:/LV5). Open the folder, then select the “MARPLOT.EXE” file.
2. MARPLOT displays a greeting window. Click OK (in Windows), or just click within the window (on a Macintosh). A map showing Prince William County is then displayed, as shown below. (If you’ve used this map

before, the view you see may differ from the view below; the difference will not cause problems.)



Next, you need to set up and run a search for the water facility, which is represented on the map by a symbol. In MARPLOT, you can search for roads, intersections, street address ranges, symbols that represent facilities or other locations, geographical features, and other kinds of map objects. The Green Valley Water Facility is located near the intersection of Loudoun Drive and James Madison Highway (also called U.S. Highway 15). Here's one way to search for this location:

3. To begin your search, choose Search from the List menu.
4. To set up the search,
  - a. Under the "Search for objects:" heading, be sure that "with names that start with..." is selected in the search types menu.
  - b. In the box to the right of this menu, type in "Loudoun."
  - c. Be sure that Individual Layer is selected in the "Layer(s) to search" menu.
  - d. Immediately below, select Roads from the menu of layers.

- e. Be sure that Maps in view is selected in the “Map(s) to search:” menu.
- f. When your search criteria look like those shown below, click Search.

The Search Criteria dialog box is shown. It has a title bar 'Search Criteria'. Inside, there is a section 'Search for objects:' with a dropdown menu set to 'with names that start with...' and a text box containing 'Loudoun'. Below this, there are two columns of dropdown menus. The left column is labeled 'Layer(s) to search:' and has two dropdowns: 'Individual Layer...' and 'Roads'. The right column is labeled 'Map(s) to search:' and has one dropdown: 'Maps in View'. At the bottom, there are three buttons: 'Search', 'Cancel', and 'Help...'. To the right of these buttons is a dropdown menu set to 'replace previous collection'.

Both “Loudoun Ave” and “Loudoun Dr” appear in the list of found items.

- 5. Click just once on “Loudoun Dr” to select it, then click Intersections (as shown below). MARPLOT will search for all intersections along Loudoun Drive.

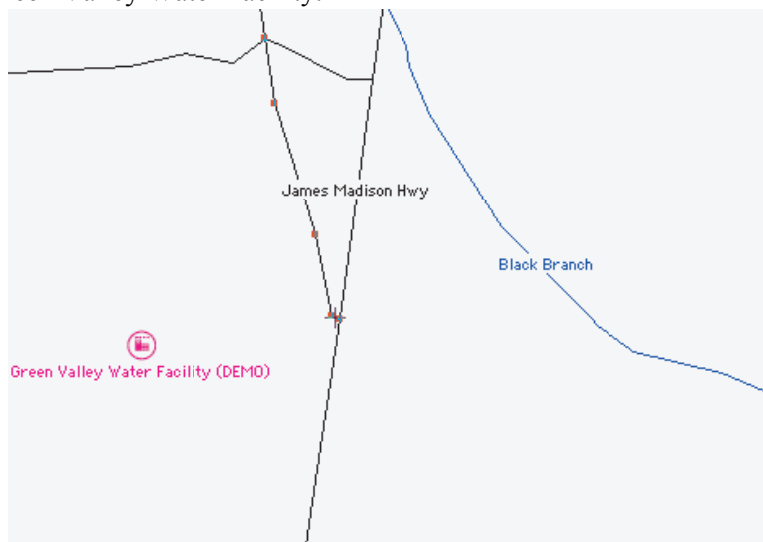
The Search Collection dialog box is shown. It has a title bar 'Search Collection'. Inside, it says 'Number of objects in collection: 2'. Below this is a table with three columns: 'Object Name', 'Layer', and 'Place/Map'. The table has two rows: 'Loudoun Ave' and 'Loudoun Dr'. The 'Loudoun Dr' row is highlighted in blue. Below the table, there is a checkbox labeled 'make all other objects on these layers invisible'. At the bottom, there are several buttons: 'Save Collection...', 'Intersections', 'Show All on Map', 'Load Collection...', 'Addresses', 'Show on Map & Zoom', 'Help...', 'Show on Map', and 'Close'. A mouse cursor is pointing at the 'Intersections' button.

Object Name	Layer	Place/Map
✓ Loudoun Ave	Roads	West Gate CDP, ...
✓ Loudoun Dr	Roads	PRINCE WILLIAM COUNTY, VA

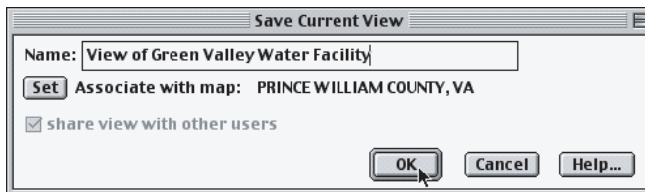
There are seven intersections along Loudoun Drive; the Green Valley Water Facility is located near the intersection with James Madison Highway (U.S. Highway 15).

6. Click just once on “James Madison Highway” to select it, then click Show on Map & Zoom. (if you’re using an older version of the map, click “U.S. Highway 15”).

You’ll see a view of the area around the intersection on your map (shown below; names may not appear in your view). The intersection is in the center of the view. To its left, you’ll see a symbol object, representing the Green Valley Water Facility.



7. To give this view a name and save it, so that you can easily return to it later, choose Save Current View... from the View menu.
8. In the “Save Current View” dialog box, type “View of Green Valley Water Facility” and then click OK.



Later, whenever you want to return to this or any other saved view, you would select Go to View from the View menu, select the name of the view (e.g., View of Green Valley Water Facility) from the list of saved views, then click Go to View.

Next, you'll link the Green Valley Water Facility symbol to the Green Valley Water Facility's record in the Facilities module:



**9.** To create a link, first check to be sure that the arrow tool is selected in MARPLOT's tool palette, as it is in the example at left. If this tool is not selected, click on it once.

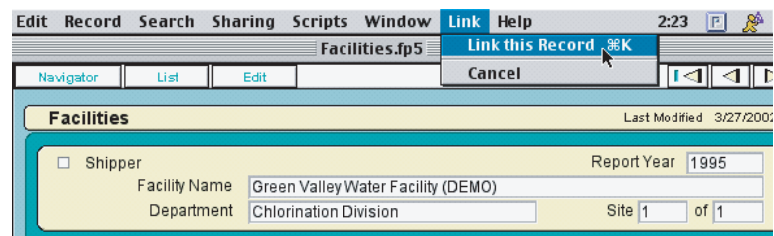
**10.** Next, click on the symbol for the Green Valley Water Facility, to select it.



When you select an object, you can see four small boxes around the object, indicating that it is selected (as at left). MARPLOT displays some basic information about the object along the lower map margin. Also, the Focus Point, a small, flashing, target-shaped icon that marks the most recent point of interest on the map, moves to the point of your click.

**11.** While the symbol is still selected (is still surrounded by the four boxes), from MARPLOT's Sharing menu, select CAMEOfm, then Link Object. You'll be taken back to the Green Valley Water Facility's record in the Facilities module (if not, find and open that record).

**12.** While that record is visible, from the Link menu, select Link this Record (as shown below).



Once you have created a link between a symbol and record, you can easily move back and forth between them:

13. To go from the Green Valley Water Facility record to the map symbol, from the Sharing menu, select MARPLOT, then Show on Map.

You'll be taken to MARPLOT. The Green Valley Water Facility symbol will be selected, and the Focus Point will appear centered on the symbol.



*Tip:* If the map is more zoomed-in that you'd like, click the zoom-out button in MARPLOT's toolbar (shown at left), then click several times on the water facility's symbol.

When you select a linked symbol on a map, you can also quickly go to the CAMEO record to which it is linked:

14. While the symbol remains selected, from MARPLOT's Sharing menu, select CAMEOfm, then Get Info. (If the symbol has become unselected, click on the arrow tool button, then click in the symbol to reselect it.)

You're taken back to the Green Valley Water Facility record in CAMEO's Facilities module.

## Working with Screening and Scenarios

Next, you'll try out using the Screening & Scenarios module to perform the **hazards analyses** explained in the *Technical Guidance for Hazards Analysis* (see "Bibliography" on page 276).

In a hazards analysis, you estimate the size of the area around a facility or other potential spill site that could be affected by the accidental release of a chemical of concern. That area is called the **threat zone**. You can use MARPLOT to display threat zones on an electronic map of your community. Once you have an estimate of the radius of the threat zone, you can plot the zone on a map in MARPLOT. You can choose to estimate the size of the threat zone around a facility or along a transportation route either by:

- using EPA's "credible worst case" assumptions to obtain a worst-case threat zone estimate (a **screening** estimate).
- entering weather conditions and other information that you believe to be more typical of the region and facility (a **scenario** estimate).

Now, you'll review the results of a screening for the Green Valley Water Facility:

1. Return to CAMEO if you're still working in MARPLOT. The Facilities record for the Green Valley Water Facility should be visible on your screen.
2. Click the Chemical Inventory tab. You'll see that chlorine is the only chemical included in this facility's inventory.
3. From the Record menu, select Show Related, then Screening and Scenario Records. Use Show Related whenever you want to see records in other CAMEO modules that are related to the record you're working with.

The Screening & Scenarios module will open in List View. You'll see the names of two records: "Screening" and "Scenario #1."

4. Double-click on the "Screening" record in the list to open it in Record View.

The screenshot shows the 'Screening & Scenarios' record view for Chlorine at the Green Valley Water Facility (DEMO). The record is titled 'Screening' and is marked as 'In Inventory'. The 'Screening Description' section includes fields for Amount Released (2000 pounds), Concentration (100 weight %), Release Duration (10 minutes), Physical State (Gas selected), and Atmospheric Concentration Level of Concern (0073 gm/m³). The 'Weather Information' section shows Wind Speed (3.35 mph) and Ground Roughness (Open Country). The 'Risk Assessment' section shows Risk (Low), Consequences (Medium), and Overall Risk (High). The Threat Zone Radius is set to > 10 miles.


Screening & Scenarios		Last Modified
Facility / Route Name: Green Valley Water Facility (DEMO)		12/3/2000
Chemical: Chlorine	CAS: 7782-50-5	
Screening Name: Screening		
<input checked="" type="checkbox"/> In Inventory	<input type="checkbox"/> In Transit	<input type="checkbox"/> Shipper
Screening Description		Notes
Amount Released: 2000 pounds	Physical State: <input checked="" type="radio"/> Gas	
Concentration: 100 weight %	<input type="radio"/> Liquid	
Release Duration: 10 minutes	<input type="radio"/> Solid	
If stored in container with a dike, enter surface area within dike: _____ sq ft		
Atmospheric Concentration Level of Concern: 0073 gm/m³		LOC Description: Greenbook LOC
Weather Information		
Wind Speed: 3.35 mph	Ground Roughness: Open Country	
Wind From: _____ in degrees measured clockwise from 0 N.	Stability Class: F	
(for example: 015, 315, 270)		
Risk Assessment		
Risk: Low	Probability of described accident occurring	
Consequences: Medium	Severity of consequence to people	
Overall Risk: High	Combination of probability and severity of consequence	
Threat Zone Radius: > 10 miles		Show on Map

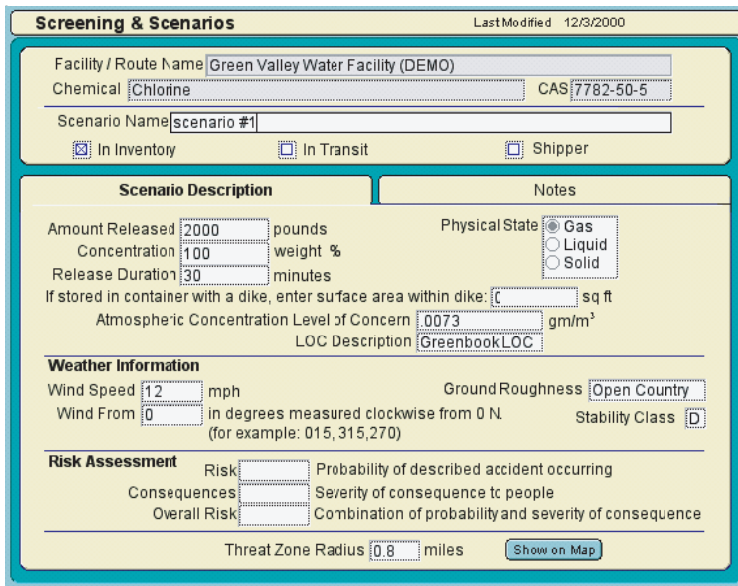
This record shows the results of a "credible worst-case" screening calculation for chlorine at the Green Valley Water Facility, made according to the procedures described in the *Technical Guidance*. In a worst-case screening, the entire contents of one of the facility's chlorine tanks are assumed to escape into the atmosphere over 10 minutes, forming a gas cloud that would drift away from the plant in whatever direction the



wind is blowing. A worst-case screening assumes a low wind speed, very little atmospheric turbulence to dilute the chlorine cloud, and a conservative estimate of the concentration of chlorine that might cause adverse health effects in people.

In the Threat Zone Radius box, you'll see the estimate of the threat zone radius. You'll see that under these worst-case conditions, the threat zone—the area potentially at risk—is predicted to extend more than 10 miles downwind. Depending on the wind direction, chlorine concentrations within the zone could reach or exceed the level of concern shown on the Screening & Scenarios record. Check the *Technical Guidance* or review “Using Screening & Scenarios to assess hazards” on page 135 to learn more about making screening calculations.

-  5. Click the right arrow button in the upper right corner of the “Screening” record (shown at left), to view the next record in the module. This record shows the threat zone estimate for a more likely scenario.



**Screening & Scenarios** Last Modified 12/3/2000

Facility / Route Name: Green Valley Water Facility (DEMO)

Chemical: Chlorine CAS: 7782-50-5

Scenario Name: Scenario #1

☒ In Inventory ☐ In Transit ☐ Shipper

**Scenario Description**

Amount Released: 2000 pounds  
 Concentration: 100 weight %  
 Release Duration: 30 minutes  
 Physical State: ☒ Gas ☐ Liquid ☐ Solid  
 If stored in container with a dike, enter surface area within dike: sq ft  
 Atmospheric Concentration Level of Concern: 0073 gm/m<sup>3</sup>  
 LOC Description: Greenbook LOC

**Weather Information**

Wind Speed: 12 mph  
 Wind From: 0 in degrees measured clockwise from 0 N (for example: 015, 315, 270)  
 Ground Roughness: Open Country  
 Stability Class: D

**Risk Assessment**

Risk: Probability of described accident occurring  
 Consequences: Severity of consequence to people  
 Overall Risk: Combination of probability and severity of consequence

Threat Zone Radius: 0.8 miles [Show on Map](#)

The highest-risk operation at the plant is the changing of chlorine tanks, done only during daytime hours. This record shows the results of a hazards analysis calculation for a release of chlorine through the valve of a

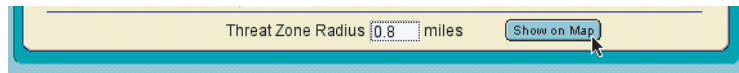
single 1-ton chlorine cylinder, which is sheared off while the cylinder is being transferred by forklift from a transport vehicle to the facility.

In this scenario, the amount released is the same as before—the contents of one tank—but the chlorine is expected to escape over 30 minutes rather than 10 minutes. Local meteorologists were able to provide a description of the most common weather conditions observed at Haymarket: instead of “worst case” weather conditions, wind speed is higher and the atmosphere is more turbulent (so that air is more quickly mixed into the chlorine cloud, diluting it to below hazardous concentrations). This time, the threat zone is predicted to extend only 0.8 miles from the accident site.

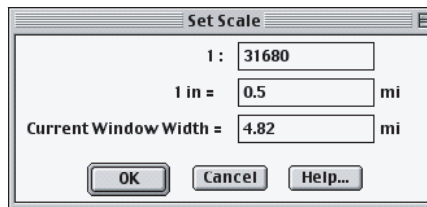
## Working with a threat zone on a map

To plot this threat zone on the map,

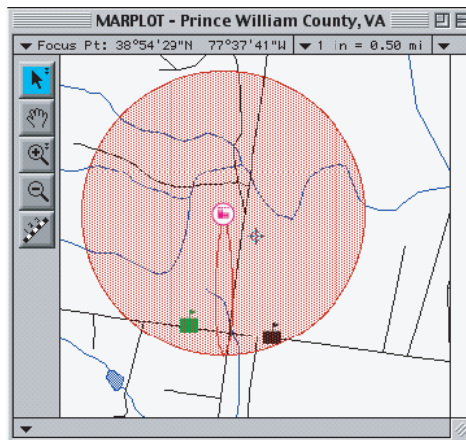
1. click Show on Map. MARPLOT will come forward, and the zone will automatically be plotted on the map, centered on the Green Valley Water Facility symbol.



2. However, at the current map scale, it's not possible to see the entire threat zone at once. To adjust the map scale, choose Set Scale from MARPLOT's View menu.
3. In the “Set Scale” dialog box, next to the “1 in =” heading, type “0.50” to change the map scale to 1 inch = 0.5 mile (as below). (Your “Current Window Width” might not match the value shown in the diagram.)



4. Click OK. You'll see the entire threat zone on your screen (as shown below).



Once you've plotted a threat zone on a map, you can check to see whether any symbol objects representing especially vulnerable populations, such as schools or hospitals, are within the threat zone.

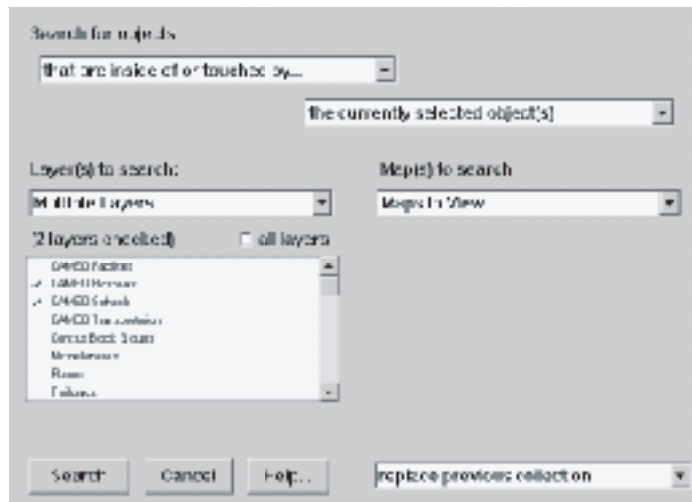
*Tip:* You can use the same procedure to check for special locations within an ALOHA footprint that you have plotted on a map. See "Checking for special locations within a footprint or threat zone" on page 159.

To check for special locations in the threat zone,

1. While the threat zone object is still selected, select Search from the List menu. (If it has become unselected, click on the zone's outer boundary to reselect it, then select Search.)
2. To set up the search,
  - a. Under the "Search for objects:" heading, select **are inside of or touched by...** from the menu of object types.
  - b. Check to be sure that **the currently selected object(s)** is selected in the next menu.
  - c. Under the "Layer(s) to search:" heading, choose Multiple layers... from the popup menu.

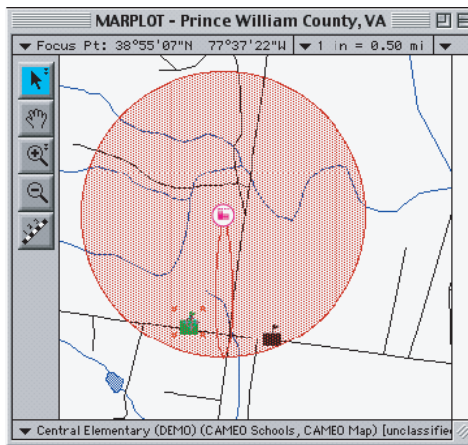
- d. In the list of layers, click on the “CAMEO Hospitals” and “CAMEO Schools” layers to place checkmarks next to the names of those layers (the checkmarks indicate that MARPLOT will search these layers).
- e. Click the names of any other layers that have checkmarks next to them, to remove the checkmarks (MARPLOT will then not search these layers).

When your search criteria look like the ones below, click Search.



- 3. The symbol object representing Central Elementary School is inside the threat zone, so it appears in the search collection. While its name is highlighted, click Show on Map.

Once the map is redrawn, the symbol for Central Elementary will be selected, and the Focus Point will be centered on it (as below).



*Note:* If more than one school and or hospital symbol was within the threat zone, you could click Show All on Map to see all the symbols selected on the map.

4. While the symbol is still selected, from MARPLOT's Sharing menu, select CAMEOfm, then Get Info. (If the symbol becomes unselected, click on it to reselect it.)

This symbol was previously linked to a record describing the school in CAMEO's Special Locations module. This record will be displayed on your screen. (If more than one linked symbol had been selected, the records linked to all those symbols would be shown to you in a list.)

You can use the Special Locations module to keep information describing vulnerable locations in your community, including emergency phone numbers you could use to quickly contact the location during the response to an incident.

In a real emergency, you might need to call a contact person at the Central Elementary School. In CAMEO, there are two ways to quickly find an emergency phone number for the school, as follows.

1. First, click the Phones tab to see the emergency phone number for Central Elementary School (shown below).

The screenshot shows a web application window titled "Special Locations" with a "Last Modified" date of 3/5/2004. The form contains fields for "Location Name" (Central Elementary (DEMO)), "Location Type" (Elementary School), and "Building Type" (Low Rise (fewer)). Below these fields are several tabs: "Address", "Population", "Phones", "Contacts", "Map Data", "Site Plan", and "Notes". The "Phones" tab is selected, displaying a table with two columns: "Type" and "Phone". The table contains one row with "Emergency" in the "Type" column and "(703) 342-0049" in the "Phone" column.

Type	Phone
Emergency	(703) 342-0049

*Tip:* In an emergency, you can quickly print out a list of phone numbers for one or more special locations to hand to a dispatcher. To do this, from the File menu, you would select Make Report. You then would click the Phones checkbox and the checkboxes for any other items you'd like included, then Make Report, then Print.

2. Second, from the Record menu, select Show Related, then Contact Records. A list of the Contacts records for the school, containing just one name, will be displayed. Double-click that name (or click the Record button in the toolbar) to open the Contacts record for Brenda Stephens, the Central Elementary School Principal. Click the Phones tab to see her telephone number (as below).

The screenshot shows a web application window titled "Contacts" with a "Last Modified" date of 11/30/2000. The form contains fields for "First Name" (Brenda), "Last Name" (Stephens (DEMO)), "Organization" (Central Elementary (DEMO)), "Title" (Principal), and "Contact Type" (Other). Below these fields are three tabs: "Address", "Phones", and "Notes". The "Phones" tab is selected, displaying a table with two columns: "Type" and "Phone". The table contains one row with "Work" in the "Type" column and "(703) 876-5432" in the "Phone" column.

Type	Phone
Work	(703) 876-5432

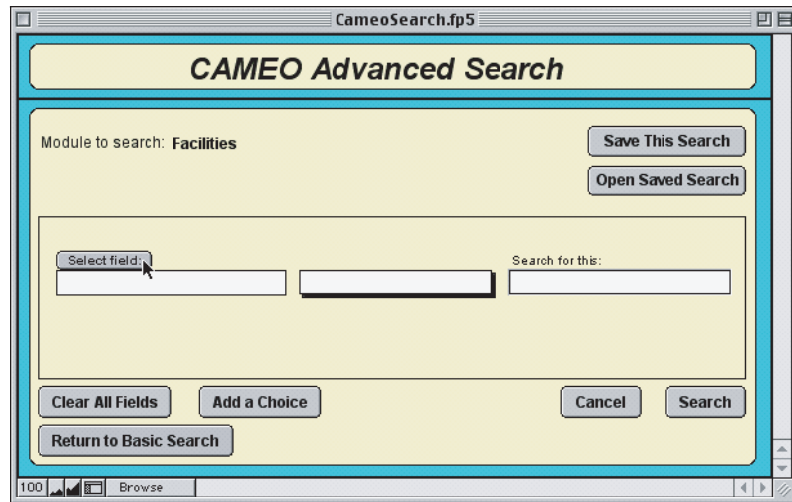
## Making an advanced search

Having evaluated the hazard posed by the Green Valley Water Facility, you'll next check to see which other facilities in Haymarket store or use chlorine. To find that out, you'll run an advanced search of the Facilities module.

1. From the File menu, select Open, then Facilities. Note that you can open any CAMEO module via the Open command.
2. From the Search menu, select Start Search, then click Go to Advanced Search (as shown below).

The screenshot shows the 'CAMEO Basic Search' dialog box. It has a title bar with the text 'CAMEO Basic Search'. Inside the dialog, there are several search criteria fields and buttons. At the top, there are two radio buttons for 'Operator for text fields': 'Contains characters' (selected) and 'Contains word starting with'. Below this are text input fields for 'Facility Name:', 'City:', and 'Address:'. There are also input fields for 'Zip Code:', 'State:', and 'County:'. Further down are checkboxes for 'Has EHS Chemical in Inventory:', 'Has Chemical in Inventory:', and 'Plotted in MARPLOT:'. There are also input fields for 'Report Year:' with a dropdown menu set to 'Is equal to', and 'Last Modified:' with a dropdown menu set to 'Is On' and a date format '(MM/DD/YYYY)'. At the bottom, there is a note: 'Note: If you enter multiple criteria, records satisfying all of your criteria will be found.' Below the note are four buttons: 'Go to Advanced Search' (with a mouse cursor pointing to it), 'Search State Fields', 'Cancel', and 'Search'.

3. Click Select Field (as shown below).

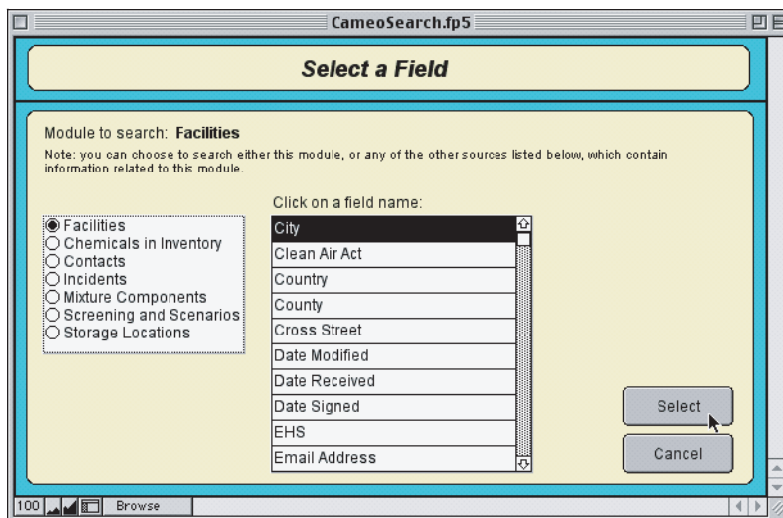


In the next steps, you'll indicate

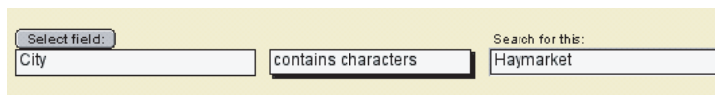
- a. which module you want to search—you're offered a choice whenever you're searching for facility records because information about facilities is stored in more than one module in CAMEO.
- b. which data field you want to search, within that module.



4. Make sure the Facilities button is highlighted, then, in the list of data fields, click City to select that data field. Click Select (as shown below).



5. The Advanced Search window is displayed again; leave **contains characters** selected in the popup menu of search types, then type “Haymarket” in the text box to the right of the menu.



6. Click Add a Choice. You need to add a second choice because you’re searching for two *criteria*: facilities that (1) *are located in Haymarket* and (2) *have chlorine in their inventories*.

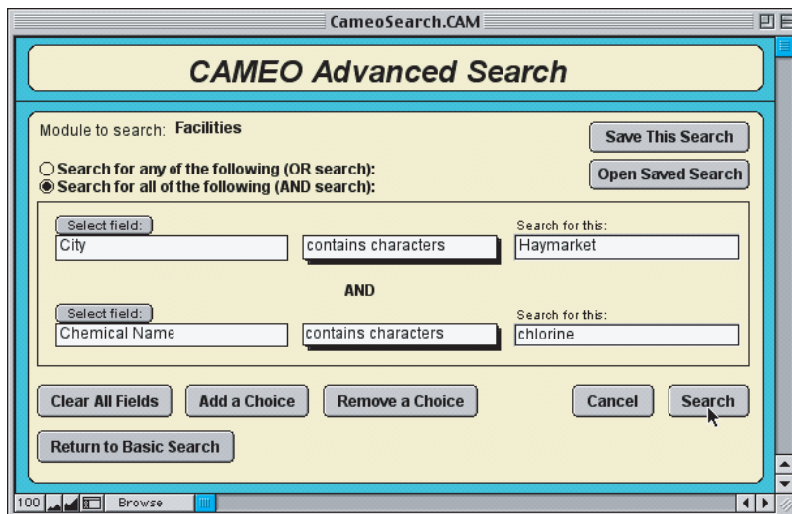
- Click the Select Field button just above the lower, blank box (as shown below).

The screenshot shows the 'CAMEO Advanced Search' window. At the top, it says 'Module to search: Facilities'. There are two radio buttons for search logic: 'Search for any of the following (OR search):' (selected) and 'Search for all of the following (AND search):'. Below these are two search fields. The first field has a 'Select field:' dropdown with 'City' selected, followed by a 'contains characters' operator and a text input box. The second field has a 'Select field:' dropdown with a mouse cursor pointing to it, followed by a blank operator box and a text input box. At the bottom, there are buttons for 'Clear All Fields', 'Add a Choice', 'Remove a Choice', 'Cancel', 'Search', and 'Return to Basic Search'. There are also 'Save This Search' and 'Open Saved Search' buttons at the top right.

- In the left-hand list, click the Chemicals in Inventory button.
- In the list of data fields, click Chemical Name, then click Select (as shown below) to return to the Advanced Search window.

The screenshot shows the 'Select a Field' window. It has a title bar 'CameoSearch.fp5'. The main area is titled 'Select a Field'. It says 'Module to search: Facilities' and includes a note: 'Note: you can choose to search either this module, or any of the other sources listed below, which contain information related to this module.' On the left is a list of modules with radio buttons: 'Facilities', 'Chemicals in Inventory' (selected), 'Contacts', 'Incidents', 'Mixture Components', 'Screening and Scenarios', and 'Storage Locations'. On the right, under 'Click on a field name:', is a list box containing: 'Acute', 'Average Amount on Site', 'CAS', 'Chemical Name' (highlighted), 'Chronic', 'Days On Site', 'EHS Chemical', 'Fire Hazard', 'Gas', and 'In Inventory'. At the bottom right are 'Select' and 'Cancel' buttons.

10. Leave the lower menu set to **contains characters**, and to its right, type “Chlorine” in the empty text box.
11. Click the **Search for all of the following** button (it’s in the upper left part of the window).
12. When your Advanced Search window looks like the one below, click Search.



You’ll see that two facilities located in Haymarket store or process chlorine: M & S Chemicals and the Green Valley Water Facility.

**Note:** Whether you click **Search for any of the following (OR search)** or **Search for all of the following (AND search)** when you set up a search for two or more criteria makes a big difference. When you click “Search for all of the following (AND search),” you’re setting up a search for all facilities that are located in the town of Haymarket *and* that also maintain chlorine on site. When you click “Search for any of the following (OR search),” you’re setting up a search for all facilities that are located in the town of Haymarket *or* that maintain chlorine on site. If you select Start Search from the Search menu again, type the same search criteria again, then click “Search for any of the following (OR search),” then click Search, you’ll discover that the search collection contains three records instead of two: Adams Petroleum Refinery now is included in the list because it meets one of your criteria—

it's located in Haymarket. But it doesn't meet the other criterion: it doesn't include chlorine in its inventory.

## **Predicting chemical reactivity**

Not only are you a member of Prince William County's LEPC; you're also a member of Haymarket's volunteer fire department. In that role, you receive a call to head out along James Madison Highway to the scene of a new incident:

A train has collided with a truck at an intersection in the industrial section of Haymarket. A tankcar and a flatbed car filled with containers have derailed. Now the tankcar is lying in a ditch alongside the tracks, surrounded by some containers that have broken loose from the flatbed car (Figure 7).

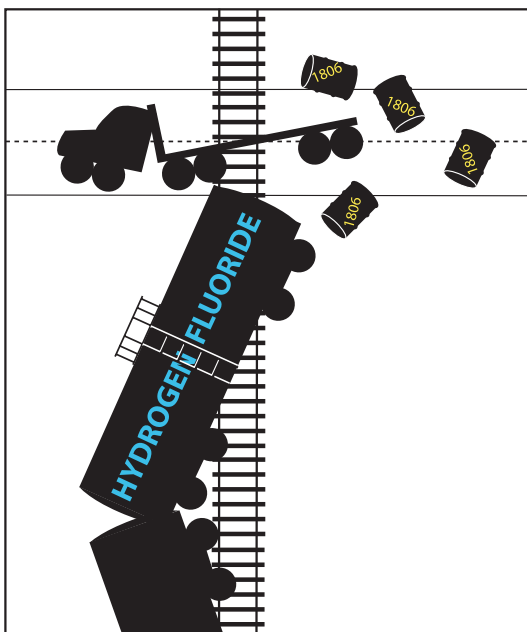
- The tankcar is labeled "hydrogen fluoride."
- the UN/NA number shown on all the containers is 1806.

You want to know: What problems could occur if these chemicals were to accidentally mix together when crews right the tankcar and collect the containers?

You can use CAMEO to answer this question. You'll "mix" the two chemicals by finding their Chemical Library records and then adding both chemicals to the Reactivity Worksheet. CAMEO will then predict the mixture's potential reactivity.

**Working the problem.** First, you'll need to search the Chemical Library for the two chemicals you want to add:

1. Click the Navigator button in the toolbar, then click Search for a Chemical.
2. Type "hydrogen fluoride" in the Chemical Name box, then press Search (searching for either a name that "contains characters" or a "word starting with" hydrogen fluoride will work).



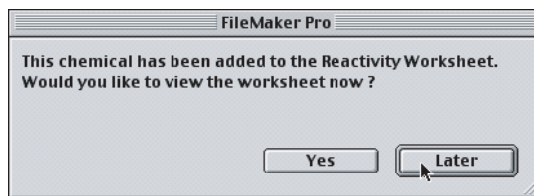
**FIGURE 7. Schematic overhead view of the accident scene.**

In the list of found records, you should find “HYDROGEN FLUORIDE, ANHYDROUS.” If it’s not there, repeat your search, this time checking your spelling carefully: in “fluoride,” “u” comes before “o.”

3. In the list, double-click on HYDROGEN FLUORIDE, ANHYDROUS to open that record, then click the Response Information Data Sheets tab.
4. Check the reactivity characteristics of hydrogen fluoride as follows:
  - a. Click the Reactive Hazards tab to see the especially acute hazards of hydrogen fluoride. You’ll see that hydrogen fluoride is both water- and air-reactive.
  - b. Click the Reactivity tab to learn more about its reactions with air and/or water and to view its Chemical Profile to review more details about the reactivity of hydrogen fluoride.



5. From the Record menu, select Add to Reactivity Worksheet (as at left).
6. When asked whether you want to view the Reactivity Worksheet, click Later (as shown below).



7. Perform a search for chemicals with the UN/NA number of 1806: from the Search menu, select Start Search; type “1806” in the UN/NA Number box, then press Search (searching for either a word that “contains characters” or a “word starting with” 1806 will work).<sup>5</sup>
8. You'll find just one chemical, PHOSPHORUS PENTACHLORIDE. Double-click on PHOSPHORUS PENTACHLORIDE to open the record for this chemical. Again, click the Response Information Data Sheets tab, then click the Reactive Hazards and Reactivity tabs to check its characteristics, and then select Add to Reactivity Worksheet from the Record menu. This time, when asked whether you want to view the Reactivity Worksheet, click Yes.

*Note:* In many cases, more than one chemical have the same UN/NA number. In such cases, you'll need more information before you can be sure of the identity of a given chemical. Even when you find just one chemical, as in this case, carefully review the information in the Response Information Data Sheets to verify that you've correctly identified the chemical at hand. In particular, check the General Description. (It says that phosphorus pentachloride is a “greenish-yellow crystalline solid with an irritating odor.”) If that description doesn't fit the chemical you find on scene, check for more information to help you be sure of its identity.

9. Check the Reactivity Worksheet to see statements about the mixture's potential reactivity (shown below):

---

5. To CAMEO, a “word” includes a series of letters or numbers, so an identification number is a “word.”

These statements tell you that the response team would need to be prepared for a possible explosion and release of a toxic gas if these two chemicals were to accidentally mix. The toxic gas that would be liberated in this reaction would be hydrogen chloride, but CAMEO doesn't report this.

The screenshot shows the 'Mixture Worksheet' window. It has a title bar and a yellow background. The main section is titled 'Chemicals In the Mixture' and contains a list box with two entries: 'HYDROGEN FLUORIDE, ANHYDROUS' and 'PHOSPHORUS PENTACHLORIDE'. Below the list box is a note: '(Double click chemical to see chemical specific reactivity information)'. There are two buttons: 'Remove All' and 'Remove Selection'. Below this is a section titled 'Hazards from mixing the reactive groups for the chemicals listed above'. It contains a text box with the following text: 'HYDROGEN FLUORIDE, ANHYDROUS mixed with PHOSPHORUS PENTACHLORIDE', '- Heat generated from chemical reaction may initiate explosion', and '- Contact with substance liberates toxic gas; causes pressurization'. At the bottom of the window are two buttons: 'MAKE REPORT' and 'Done / Close Window'.

10. When you've finished reviewing the worksheet, click Done/Close Window.

## Finishing up and moving on

You can choose either to keep the sample records, map symbols, and map used in this Guided Tour, or to delete them. Keeping them will not interfere with your other uses of CAMEO.

To delete the sample records, symbols, and map, follow the steps below.

### To delete the sample records:

1. Click the Navigator button in the toolbar, then click the Facilities button. Click the List button in the toolbar if you're not in List view.

2. From the Search menu, select Clear Search. This module still displays just the found set of records that match your most recent search; clearing the search allows you to access and work with all the records.
3. From the Record menu, select Delete All Records. The five sample records in this module are deleted, along with all records related to the deleted facilities in the Chemicals in Inventory, Screening & Scenarios, and Contacts modules.

*Important:* Select Delete All Records in this and other modules only if you have not yet entered any other data into the module that you'd like to keep. If you have entered data, select each sample record (all have "DEMO" in their names), then select Delete Facility from the Record menu.

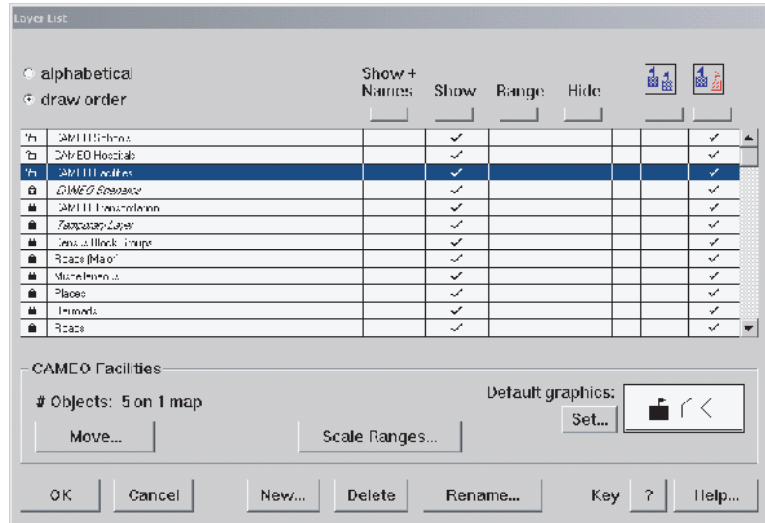
4. Click the Navigator button in the toolbar, then click the Contacts button.
5. From the Record menu, select Delete All Records to delete the sample records in this module (or, if you have entered data you want to keep, select each sample record, then select Delete Contact from the Record menu).
6. Click the Navigator button in the toolbar, then click the Special Locations button.
7. From the Record menu, select Delete Special Location to delete the single sample record in this module.
8. Click the Navigator button in the toolbar, then click the Routes button.
9. From the Record menu, select Delete Route to delete the single sample record in this module.

**To delete the sample map symbols and map:** Follow these steps to delete the sample map symbols (which are located on your CAMEO Map) and the sample Prince William County map from your hard drive.

1. Click the Navigator button in CAMEO's toolbar, then click the MARPLOT button to go to MARPLOT.
2. From MARPLOT's List menu, select Layer List.
3. Click the lock icons next to CAMEO Facilities, CAMEO Hospitals, and CAMEO Schools to unlock these layers (when clicked, the icons change

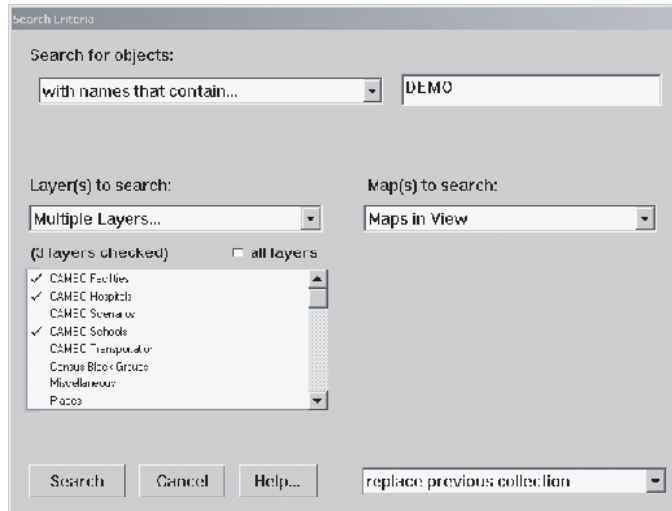


to look like unlocked padlocks). The layer list should look like the one below. Click OK.

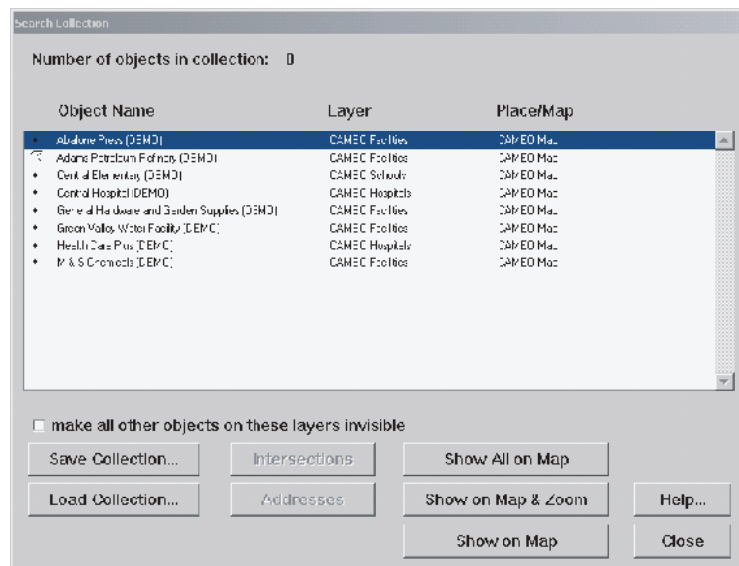


4. From the List menu, select Search.
5. Under “Search for objects,” select “with names that contain.” In the text box to the right, type “DEMO”.
6. Under “Layers to search,” select Multiple Layers.
7. Click on “CAMEO Facilities,” “CAMEO Hospitals,” and “CAMEO Schools” to place checkmarks next to these layers. Click on any other

layers that are checked, to uncheck them. When you've finished, your search criteria should look like the ones below.



8. Click Search. The eight sample symbols should appear in the search collection (as shown below).





9. Click Show All on Map. All six symbols will appear selected on the map.
10. From the Edit menu, select Clear (as at left). The sample objects are deleted from your CAMEO map.
11. Quit (Exit) from MARPLOT.
12. On your hard drive, find and open the “MARPLOT” folder.
13. Move the PWC\_MAP folder to the Recycle Bin (in Windows) or Trash (on a Macintosh).